10-1999

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ISSN 1525-3066

Center for Policy Research
Working Paper No. 12

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October 1999

$5.00

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Abstract

There are thousands of studies on the gay and lesbian population. Because of the difficulty of sampling this population, most studies have used "convenience samples" for analysis. Until recently, it was extremely rare that survey data on gays and lesbians were collected from a known sampling frame, and equally rare that the same survey instrument was fielded to the gay and lesbian population *and* to a comparison group of other men and women. Comparative analysis of the gay and lesbian population has thus been difficult, and researchers have been properly reluctant to draw general inferences from available samples of gays and lesbians. This paper has two related objectives. First we provide an overview of standard social science data sources that now allow some systematic study of the gay and lesbian population in the United States. We consider how sexual orientation can be defined in each data source, and we note the potential sample sizes of gays and lesbians from each data source. Special attention is given to the important problem of measurement error, especially the extent to which individuals recorded as gay and lesbian are indeed recorded correctly. Our concern is that as gays and lesbians comprise a relatively small fraction of the population, modest measurement problems could lead to serious errors in inference. In examining gays and lesbians in multiple data sets we also achieve a second objective—we provide a set of statistics about the gay and lesbian population, relevant to several current policy debates.

Introduction

There has been historically a notable absence of solid demographic research on the gay and lesbian population. This is hardly surprising. Few sizable surveys of this population have been conducted, and existing surveys that do provide large samples of gays and lesbians utilize "convenience sampling," such as samples drawn from readers of particular magazines or newspapers, or responses solicited from Internet sites or in gay bars. Researchers have been properly reluctant to draw general inferences about the gay and lesbian population from these samples. Recently, though, a number of scholars have begun to study economic and social issues in the gay and lesbian population using sizable samples with known properties—samples drawn from the General Social Survey, the National Health and Social Life Survey, and the 1990 United States Census.

We view the recent emergence of careful systematic empirical work on the gay and lesbian population as valuable on two fronts. First, this work can usefully inform public policy. The past decade has been marked by a significant amount of public debate and legislation regarding gay and lesbian Americans. Examples include:

- Initiatives designed to prohibit discrimination or conversely prohibit civil rights protection based on sexual orientation (e.g., Colorado) have been debated at virtually all levels of government;

- Increasing numbers of companies now provide domestic partnership benefits (including health insurance) to gay and lesbian couples; and San Francisco has recently mandated this coverage for companies doing business with the city. A number of municipalities have established domestic partnership registries in anticipation of the need to legally validate gay and lesbian partnerships;

- The United States military currently has a controversial policy prohibiting openly gay and lesbian individuals from serving in the armed forces;

- Hawaiians recently debated becoming the first state to legalize same-sex marriage. In response, numerous states passed legislation refusing to recognize same-sex marriages, which led Congress to respond by passing the Defense of Marriage Act that gave states authority not to recognize those unions;

- The emergence of gay and lesbian couples seeking custody or adoption of children has sparked heated public policy debates about gay and lesbian parental rights and suitability for adoption.

Informed public policy analysis about these issues requires accurate demographic information about the gay and lesbian population.[1]

Second, the careful empirical analysis of the gay and lesbian population holds promise for helping social scientists understand a wide range of important questions—questions about the general nature of labor market choices, human capital accumulation, specialization within households, discrimination, and geographic location decision. In their landmark study, *American Couples,* Philip Blumstein and Pepper Schwartz (1983) demonstrate that studying same-sex couples is invaluable for learning about gender roles in heterosexual couples. Below we note several analogous examples in which insight can be provided into specific social and economic issues by analyzing data for gays and lesbians and for a comparison group of heterosexuals drawn from a known sampling frame.

Our work is intended to be an overview of available data currently being used by social scientists to study the gay and lesbian population in the United States, and, in so doing, to provide interesting and policy relevant statistics about this population. We focus on what can be learned about the gay and lesbian population from three large data sets—the General Social Survey (GSS), the National Health and Social Life Survey (NHSLS) and the U.S. Census. In particular, we examine four characteristics of the gay and lesbian population: the geographical distribution of gays and lesbians, the veteran status of gays and lesbians, the family structure of gay and lesbian households, and the education, earnings, and wealth of gays and lesbians. The

importance of these questions to policy debates is quite clear. First, the geographical distribution affects the distribution of costs and benefits of any policy aimed at protecting gay and lesbian rights or excluding gay and lesbians from protected status. Second, the current discussion of the military's "don't ask, don't tell" policy with respect to gays and lesbians begs the question about how effective previous, more active proscription has been in excluding these individuals from the military. Third, any debate about policy with regard to adoption or custody of children by gay and lesbian couples would benefit from an accurate account of the fraction of such couples that currently have children. Finally, discussions of whether gays and lesbians should be extended protection from acts of discrimination in housing or employment markets would be helpfully informed by clear and accurate statistics verifying how gays and lesbians are doing economically in the absence of such legal protection.

Our paper proceeds as follows: in the next section we provide a review of the limited economic and demographic literature that investigates gays and lesbians using the NHSLS, GSS or 1990 Census data. [2] Following that we discuss the three data sources with a particular emphasis on how gays and lesbians can be identified in each survey. We pay special attention to confirming that the sample of gays and lesbians identified are not simply the result of recording error. Having examined the internal consistency of each data, we turn in the next section to a comparison of findings from the data sets (and in some instances to other available information). In doing so, we develop a statistical portrait of the gay and lesbian population that is broadly consistent across data sources. The final section contains concluding remarks.

Literature Review

The National Health and Social Live Survey (NHSLS) served as the basis for two well-known books, *Sex in America: A Definitive Study* (Michael, Gagnon, Laumann and Kolata,

1994), and *The Social Organization of Sex: Sexual Practices in the United States* (Laumann, Gagnon, Michael, and Michaels 1994). This latter book features one chapter (Chapter 8) on gays and lesbians, which focuses on the definition of homosexuality, and the prevalence of gay, lesbian and bisexual behavior in the United States. One of the main issues addressed by Laumann et al. (1994, Chapter 8) is how varying definitions of homosexuality greatly affect the measured incidence rates. They show that while the incidence rate of homosexual desire is 7.7 percent for men and 7.5 percent for women, the rate at which men identify themselves as gay is only 2.8 percent and the rate at which women identify themselves as lesbians is only 1.4 percent. These rates are very similar to the rates at which men and women have exclusively same-sex sex (3.0 percent and 1.6 percent).

The authors' findings are extremely important for two reasons. First, they demonstrate the importance of sampling from a known population. There is a widespread belief, based in large measure on Kinsey's pioneering research (e.g., Kinsey, Pomeroy, Martin, and Gebhard 1948) that "10 percent of males are more or less exclusively homosexual." This does not find support in the careful work of Lauman et al.[3] Second, they highlight that the very definition of homosexuality is fraught with ambiguity—desires are common relative to the number of people who act on them—but, nonetheless, gay and lesbians do have substantially different behavior than other individuals on some substantial dimensions (such as being less likely to enter into traditional marriage relationships).

In addition to standard economic and demographic data, the NHSLS collects by far the most extensive information on sexual practices and sexual partners. It is the only data set that collects information on sexual practices over the life course—an important advantage because sexual orientation is not immutable. Any inferences about gays and lesbians from this sample, however, are based on very small samples. For example, only 12 women identified themselves

as lesbians and only 27 men identified themselves as gay in a sample of 3,432 American men and women. As we discuss below, far more men and women have had same-sex experiences during their lifetime.

A second data source is the General Social Survey. To our knowledge, Lee Badgett (1995) was the first author to publish work that exploits the GSS to systematically compare gays and lesbians with heterosexual counterparts. She studies earnings by sexual orientation using pooled 1989-1991 data from the GSS. For most of her analysis, Badgett (1995) defines lesbians, gay men and bisexuals as individuals having more same-sex sexual partners than opposite-sex sexual partners since age 18. Using this definition, she finds that having conditioned on a variety of characteristics, gay men earn 28 percent less than heterosexual men (a statistically significant differential). Lesbian women are also found to earn less than other women, but this is not statistically significant.

Dan Black, Hoda Makar, Seth Sanders, and Lowell Taylor (1998) provide a similar analysis using GSS data from 1988-1991, 1993, 1994, and 1996. They note that there are a number of ways of defining sexual orientation using the GSS. Some definitions measure current sexual behavior while others define "gay" or "lesbian" on the basis of same-sex experience that might have occurred in the distant past. The authors argue that the definition used should matter in theory, and they find that indeed it does matter empirically. One general result in their work is a confirmation of Badgett's earlier finding for men—equally skilled gay men appear to earn substantially less than other men. Women who are lesbians at the time of the survey, however, earn 20 percent to 35 percent more than other equally skilled women.

Pooling the GSS samples over eight years provides a reasonable sample of gay and lesbians, between about 150 and 450 individuals (depending on the definition used), along with

several thousand other men and women. While this is obviously much more satisfactory than the NHSLS, the sample is still quite small.

A third data source, the 1990 U.S. Census, allows a sample of over 13,700 gays and lesbians to be identified. In collecting the Decennial Census, the Census Bureau designates as the head of household (the householder) "the member (or one of the members) in whose name the home is owned, being bought, or rented." The Census Bureau then collects information on all the members of the household and identifies each member by his or her relationship to the householder. Prior to 1990, couples living outside of marriage in marriage-like relationships were not identified separately from individuals living together as roommates. Demographers had noticed, though, an increasing prevalence of the former type of households. Bumpass and Sweet (1989), for example, reported that only 3 percent of women born between 1940 and 1944 had ever cohabited by age 25; for women born 20 years later, 37 percent of women reported cohabiting by age 25. This trend prompted the Census Bureau to change the survey instrument for the 1990 Census to allow unmarried partners to be identified separately from roommates.

Fortunately, the Census instrument allows household heads to report living with an unmarried partner regardless of the partner's sex. This differs from many previous surveys (e.g., the National Longitudinal Study of the Class of 1972) which explicitly restrict cohabitation questions to heterosexual partnerships. With the use of the Census, we are able to identify a sample of over 6,800 gay and lesbian households. Clearly, this is not a random sample of people who would identify themselves as gay or lesbian. Nor is it a random sample of people who have engaged in same-gender sex. By construction, this sample contains only individuals who are involved in a cohabiting relationship. Exploring the nature of this sample is a major contribution of this paper.

To our knowledge, the first use of the 1990 Census data to study a group of gays and lesbians was by Lisa M. Krieger (1993), a reporter for the San Francisco Examiner. Since then these data have proved useful for several academic studies. Black, Gary Gates, Sanders, and Taylor (1997) study the effects of sexual orientation on the earnings of men. They find that men in gay couples earn substantially less than other men, although much of this earnings difference may be explained in some measure by the lower level of household specialization in gay couples. Marieka Klawitter (1997) studies the effects of sexual orientation on the earnings among women. She finds that women in lesbian couples earn substantially more than other women, but much of the difference is attributable to differences in earnings-related characteristics. Klawitter and Victor Flatt (1998) investigate the effects of state and local antidiscrimination policies for sexual orientation. They find little evidence that these policies are correlated with higher earnings for gay men. Black, Gates, Sanders, and Taylor (1999) study the geographic distribution of gay men. They argue that gay men have a higher willingness to pay for non-child amenities and provide evidence that this influences gay men to locate in unusually attractive locations. Finally, Lisa Jepsen (1998) and Jepsen and Jepsen (1999) study assortative mating and labor market specialization of gay and lesbian couples. While these papers constitute a useful advance in understanding gays and lesbians in the United States, there has been no systematic investigation of the reliability of their principal data source.

Identifying Gays and Lesbians in Social Science Data Sets

The General Social Survey (GSS) and the National Health and Social Life Survey (NHSLS)

The GSS is designed as a survey to measure social indicators of opinions and attitudes over time in the United States. The survey uses a multistage area probability sampling design. A randomly selected adult from each household in selected geographic areas is asked to participate in the survey. Approximately 1,500 adults were sampled annually from 1972 through 1994 (except in 1981 and 1992). Since 1996, the sample size has been doubled but the survey has been conducted only every two years. The NHSLS was conducted from the same probability sampling design as the GSS. In 1992 the GSS was not fielded and the resources were dedicated to fielding the NHSLS. The NHSLS is restricted to individuals aged 18 to 59, while the GSS samples adults at any age over 18.

In order to compare gays and lesbians to other men and women, one cannot avoid the complicated question of what it means to be gay or lesbian. The GSS and NHSLS have a set of common questions on sexuality that allows several ways of defining sexual orientation. Beginning in 1988, the GSS asked several questions about the gender of individuals with whom the respondent has had sex. Specifically, in each year since 1988 respondents were asked, "Have your sex partners in the last 12 months been … exclusively male, both male and female, exclusively female?" Beginning in 1991 a parallel question was asked about a respondent's sex partners in the five years prior to the survey. In each year since 1989 the GSS asks both male and female respondents, "Now thinking about the time since your 18th birthday (including the past 12 months) how many male partners have you had sex with?" A parallel question on the number of female partners is asked.

In combination with the respondent's gender, these questions can be used to classify a respondent's sexual orientation by four different definitions. The first and second definitions, using "having ever had a same-sex sex partner" and "having had at least as many same-sex as opposite-sex sex partners since age 18," rely on information about the gender of sex partners since age 18. The third and forth definitions, using "having had exclusively same-sex sex over the last year," and "having had exclusively same-sex sex over the last five years," rely on the gender of sex partners over the last year or last five years.[4] In Table 1 we report the incidence rates, and sample counts of gay and lesbian status based on these four different definitions using a sample that pools data from the 1989-1991, 1993, 1994, and 1996 GSS and the NSHLS. As in Lauman et al., we find that the incidence rate of homosexuality varies greatly depending on how homosexuality is defined. For example, 4.7 percent of men in the combined samples have had at least one same-sex experience since age 18, but only 2.5 percent of men have engaged in exclusively same-sex sex over the year prior to the survey. Similarly, while 3.5 percent of women have had at least one same-sex sexual experience, only 1.4 percent have had exclusively same-sex sex over the year prior to the survey. Table 1 also shows that regardless of definition, the samples of gays and lesbians is small in the GSS and NHSLS, even when we combine seven years of data.

Table 2 shows that the definitions of homosexuality are not as correlated as one might think. This is particularly true for women. For example, we find that among women who had at least one same-sex sex partner since age 18, only 28 percent have, over the last year, been involved in exclusively same-sex sexual relationships. By comparison, 42 percent of men who have had a same-sex sexual partner since age 18 have had exclusively same-sex sex over the year prior to the survey.

The NHSLS has two unique features that make it far more valuable than simply an additional year of GSS data. First, it is the only large probability survey that asks respondents directly about their sexual orientation. Specifically, the questionnaire asks, "Do you think of yourself as … heterosexual, homosexual, bisexual, or something else?" Table 1 shows that the incidence rate of homosexuality is slightly lower by this definition than by a definition of having had exclusively same-sex sex over the last year. Because of the low incidence rate (and the modest sample size of the NHSLS), only 12 women and 27 men report thinking of themselves as homosexual.

The second unique feature of the NHSLS is that the survey records detailed data on sexual partners and on living arrangements between the respondent and all sexual partners over his or her lifetime. As will be clear below, understanding partnership is key to understanding the sample of gays and lesbians identified in the 1990 Census data. In the NHSLS data we are able to define gay and lesbian respondents as "partnered" if at the time of the NHSLS survey they were cohabiting with a partner with whom there was a sexual relationship. Unfortunately, the GSS has much more limited information on sex partners and on cohabitation. In the GSS we know only the respondent's current household structure, and identifying a household member as an "unmarried partner" is not an option. Since 1988, however, the GSS has asked respondents, "Was one of your partners (in the last 12 months) your husband, wife or regular sex partner?" In the GSS, we can define a respondent as "partnered" if he or she either (1) has a spouse in the household (for gays and lesbians a spouse of the same gender), or (2) he or she lived with an unrelated adult in the household and also reported having had sex with a "husband, wife or regular sex partner."[5]

Table 3 presents the partnership rate among men and women who had exclusively same-sex sex over the year prior to the survey. We estimate that in the combined GSS and NHSLS

data that 28.4 percent of gay men and 44.1 percent of lesbians are partnered at the time of the survey. The NHSLS, with its rich cohabitation history also lets us calculate the rate at which gays and lesbians were ever partnered, i.e., living with a same-sex sexual partner for at least one month. We find that 67.9 percent of gay men and 93.8 percent of lesbians lived with a same-sex sexual partner at some time. Finally, we present the same statistics for the set of men and women in the NHSLS that self-identify as gays and lesbians. While the samples are small, we find that the partnership rates among gays and lesbians who self-identify to be quite similar to the rates for gays and lesbians defined by their sexual experience over the year prior to the survey.

Our first four definitions of sexual orientation in the GSS rely on accurate recording of the respondent's gender, as well as accurate recording of the gender(s) of the respondent's partners. In general, accurate recording of gender is not an issue in social science data. Because only a small fraction of the United States population is gay or lesbian, however, inaccurate reporting of gender becomes a salient issue. To see the issue at hand, consider an individual with one partner. Let the recorded gender of a respondent, *S*, and the recorded gender of a respondent's partner, *P*, take on one of two values M or F (male or female). Let *S** and *P** be, respectively, the respondent's true gender and the true gender of a respondent's partner (that is, gender in the absence of recording error). Our focus is on the following question: Given that there is inevitably some recording error in *S* and *P*, among men who recorded "gay" (have same-sex partners), how many are in fact gay? A simple Bayes' Rule calculation helps illustrate the potential magnitude of gender misclassification, and the important sources of misclassification:

$$\Pr\left(S^* = M, P^* = M \mid S = M, P = M\right) \tag{1}$$

$$= \frac{\Pr\left(S^* = M, P^* = M\right) \times \Pr\left(S = M, P = M \mid S^* = M, P^* = M\right)}{\sum_{s \in \{M,F\}} \sum_{p \in \{M,F\}} \Pr\left(S^* = s, P^* = p\right) \times \Pr\left(S = M, P = M \mid S^* = s, P^* = p\right)}.$$

Suppose, for example that incorrect recording of a respondent's gender occurs with the same frequency for a respondent as does the incorrect recording of the gender of a respondent's partner. In addition, suppose that incorrect recording of gender is independent of a respondent's sexual orientation. Then equation (1) reduces to:

$$\Pr\left(S^* = M, P^* = M \mid S = M, P = M\right)$$

$$= \frac{\Pr\left(S^* = M, P^* = M\right) \times \Pr\left(S = M \mid S^* = M\right) \times \Pr\left(P = M \mid P^* = M\right)}{\sum_{s \in \{M,F\}} \sum_{p \in \{M,F\}} \Pr\left(S^* = s, P^* = p\right) \times \Pr\left(S = M \mid S^* = s\right) \times \Pr\left(P = M \mid P^* = p\right)}. \quad (2)$$

Evidence suggests that the fraction of gays in the population, $\Pr\left(S^* = M, P^* = M\right)$, is approximately 2.5 percent, the fraction of lesbians in the population, $\Pr\left(S^* = F, P^* = F\right)$, is approximately 1.5 percent, and the remaining 96 percent of the population is approximately evenly divided between heterosexual men, $\Pr\left(S^* = M, P^* = F\right)$, and heterosexual women $\Pr\left(S^* = F, P^* = M\right)$. Because the vast majority of the population is heterosexual, even modest recording error of a respondent's gender or the gender of the respondent's partner(s) can lead to the "gay" sample including a substantial number of respondents who are simply wrongly classified. Equation (2) shows that the two most serious sources of error are for the recording errors in the largest sub-populations—heterosexual men whose gender is wrongly recorded as "female" and heterosexual women whose partner's gender is wrongly recorded as "female." The potential magnitude of these problems is substantial. If one-half of one percent of own and partner's gender is in error, then equation (2) indicates that 16 percent of the sample classified as gay is not gay and 24 percent of the sample classified as lesbian is in fact not lesbian.[6]

There is no validation study of the accuracy of the demographic variables in the GSS or NHSLS.[7] There are, however, several ways to check the internal consistency of the GSS data.

For example, the survey asks each respondent their gender twice, once to collect background characteristics of respondents and once to collect the relationship between persons living in the same household. For the 1988-1996 surveys, these two reports of gender agree in 96.13 percent of all cases in which the respondent was the head of household or a spouse, suggesting an error rate of about 1.95 percent.[8] Similarly, there are multiple reports of the gender of the respondent's sex partners. For example, during the 1989-1996 surveys, 4,105 respondents reported having sex with a man over the last year and also reported the number of men with whom they had sex since age 18. Clearly, if the respondent reported having sex with a man last year, but then reported never having had sex with a man since age 18, one of the reports is in error. This occurred in only 0.8 percent (33) of the cases, yielding an error rate of 0.4 percent. If the rate at which gender is incorrectly recorded is 1.95 percent and the rate at which partner's gender is incorrectly recorded is 0.4 percent, equation (2) suggests that 32 percent of respondents classified as "gay" in fact are not gay and 43 percent of respondents classified as "lesbian" are not lesbian. Because of the nature of the recording error, most respondents mistakenly coded as gay are heterosexual women with their gender miscoded. Most respondents mistakenly recorded as lesbians are heterosexual men with their gender miscoded.

It is important to understand the implication of this misclassification. For example, women generally earn less than men in the labor market. Given this, it might be easy to conclude that men recorded as gay in our sample earn less than other men, even if, in the population, men who are truly gay have the same average earnings as other men. (This would occur if a substantial number of men recorded as gay are heterosexual women with gender recorded incorrectly.) In drawing conclusions about differences between gay men and other men, or lesbian women and other women, it is paramount that this measurement issue be addressed.

There is no optimal method for addressing this issue with the GSS. One reasonable approach is to use only observations in which the two reports of the respondent's gender are in agreement. A second approach is to attempt to combine the various measures of sexual orientation into one reliable one. For example, Black et al. (1998) examine the robustness of their analysis of gays and lesbians as follows: they start with the observation that only a small fraction of heterosexual men and women ever have sex with a member of the same gender.[9] Gay men, however, typically have had sex with a woman at some time, and similarly lesbian women have typically had sex with a man at some time since age 18. Black et al. (1998) thus suggest that one way of limiting the intrusion of gender misclassification is to exclude all men recorded as currently "gay" who have *not* had sex with a women at some time since age 18. (Similarly, they exclude all women recorded as lesbians who have not had sex with a man at some time since age 18). The cost of such a procedure is clear: gay men who have never experimented with opposite-sex sex will be excluded from the sample of gays. The benefit of such a procedure is that virtually all women who have been mistakenly been coded as men will be eliminated from the sample of gay men. (The only women in the "gay" sample would be women who have their gender miscoded *and* had same-sex sex. In sample sizes of the sort we use, this would be a very small number of individuals, probably zero.)

The 1990 Census Public Use Micro Samples

In this section, we explore how the 5 percent Public Use Micro Sample (PUMS) of the 1990 Decennial Census can be used to construct a sample of gay and lesbians.[10] Starting with the 1990 Census, the Bureau of the Census allowed respondents to identify themselves as unmarried partners as a means of measuring cohabitation of unmarried adults. While the Bureau of the Census does not allow same-sex couples to identify themselves as married,[11] same-sex couples can be identified as a same-sex, unmarried partnership. We begin with a sample of

6,632,090 households. Of these, 293,471 were group quarters and 807,558 were vacant housing units, and we exclude them from our analysis. To identify same-sex partnerships, it is crucial that we obtain an accurate measure of the relationship of household members to the householder. We therefore excluded 205,494 households because some household member's relationship to the householder was imputed.[12]

Figure 1 displays our schema for classifying the remaining 5,325,565 households in the 1990 Census. The double outlined boxes represent our three relationship categories, households in which the head has no apparent marriage-like relationship (A), households in which the head has a marriage-like relationship (B), and households in which the head appears to have multiple marriage-like relationships (C).[13] Each marriage-like relationship is divided into sub-groups. Sub-groups with solid lines are in principle observable from the data, while sub-groups with broken lines are unobservable. There are just over two million households with no marriage-like relationship. (We immediately exclude 57,321 of these households because either the householder was under 18 or the householder's age was allocated.) A vast majority of these households with no marriage-like relationship are comprised of single adults (1.5 million). Obviously, some of these individuals are gay or lesbian, but because the Census does not ask questions about the respondent's sexual orientation, they cannot be identified. Of the remaining households, 132,598 households are comprised of three or more adults (A.3). Another 260,929 households are related adults, which we also do not characterize further (A.2.1). Of the 124,519 households with two unrelated adults (A.2.2), 48,380 are mixed sex (A.2.2.2), divided between opposite-sex roommates and cohabiting couples who chose not to identify themselves as unmarried partners, while 39,407 are two-male (A.2.2.1) and 36,732 are two-female (A.2.2.3) households. These households are clearly comprised of heterosexual and homosexual individuals, but we have no means of identifying the sexual orientation of the respondents.

There are about 3.2 million households that do have one marriage-like relationship in the household. (We immediately exclude 60,591 households with allocated age or gender and household in which either the partner or the householder was under 18.) Over 3.0 million are heterosexual married couples (B.1). There are 151,358 thousand households that are opposite-sex couples who are unmarried partners (B.2). Finally, there are 6,863 same-sex couples who are unmarried partners, with 3,800 of the couples being male (B.3.1) and 3,063 of the couples being female (B.3.2). These couples represent same-sex couples with each partner over the age of 18. By excluding all households with any age allocation, any gender allocation, and any relationship to householder allocation, we can be assured that respondents did indeed indicate they were in a same-sex unmarried partnership.

There are two immediate important questions about our sample. First, are same-sex partners identified in the sample indeed gay or lesbian, or are they instead non-partnered individuals that have been measured with error? While the samples of gay and lesbian households are quite large, they comprise only about 0.1 percent of all households in the Census. Thus even small levels of misclassification of unmarried partnership status might lead to a large fraction of same-sex couples in B.3 being erroneously classified. Second, even if these 6,880 households are gay and lesbian, how do these households relate to the population of gays and lesbians more generally? Obviously, this sample necessarily excludes gays and lesbians not living in partnered relationships, and furthermore it is likely that the Census greatly undercounts partnered gays and lesbians.

Our first concern is establishing an *a priori* case that the same-sex partners we observe are not predominately "measurement error." We return shortly to issues of how partnered gays and lesbians differ from non-partnered gays and lesbians, and how the sample of partnered gays and lesbians differ from a random sample of partnered gays and lesbians.

One case in which some sort of measurement error has clearly occurred is among households classified as having multiple marriage-like relationships (C).[14] The extent and type of error recorded in such cases gives an important clue about the extent and type of measurement error we might expect to face elsewhere in the data (particularly in B.3). The most prevalent reason for apparent multiple partnerships is that a child is classified as a partner.[15] Of the 1,788 apparent multiple marriage-like relationships, 1,050 households have one of the partners under age 18 or with an allocated age or gender. This type of error will not effect our measurement of gay and lesbian couples as all of our same-sex partnerships in B.3 have both partners age 18 or older and have all household members with non-allocated age and gender. 738 multiple marriage-like relationships remain.

The first hypothesis we can investigate is that these errors are simply mistakes, cases in which a very small number of individuals randomly "check the wrong box." Table 4 provides us with a means of investigating this possibility. The first row of this table shows that of the 738 households with multiple marriage-like relationships, 86 are three-adult households comprised of one married couple and an additional partner. Altogether there are 450,717 three-adult households in which two of the adults are married. Since only 86 of 450,717 householders marked an adult as an unmarried partner, the error rate among these households is trivial, less than 0.02 percent. Among four-adult households with a married couple present, error in the form of accidentally "checking the wrong box" also extremely low, less than 0.02 percent.[16] Similarly, among five-adult and six-adult households, this sort of error is virtually non-existent. If we perform a similar exercise among households in which there are no married couples, however, the error rate is much higher. Suppose that among three-adult households in which there is an unmarried couple and an additional adult, the householder occasionally "checks the

wrong box." The error rate of this outcome is 229/15,930 or 1.44 percent, and the implied error rate for similar households with four to six adults is between 1.95 percent and 2.54 percent.

This provides strong evidence that the error present among households with multiple marriage-like relationships does *not* take the form of random error ("checking the wrong box") that affects all individuals with equal probability. Instead, there is apparently a small but non-trivial number of individuals in households with no married couple who "misinterpret" the meaning of "unmarried partner." For example, a respondent may consider his two roommates "partners" if household resources are shared. If this is the form of the error, then it is an easy matter to calculate its incidence. Altogether there are 153,048 households in our sample with three or more adults but no married couples.[17] There are 592 errors among these households, for an error rate of 0.39 percent.

We consider even this low rate an upper bound on the rate of misclassification for our sample of gay and lesbian couples. Among the 592 errors by households with 3 or more adults but no married couple, 540 indicate that the householder has exactly two unmarried partners. We suspect that for the most part these cases are *not* the consequence of a misinterpretation of the meaning of "unmarried partner" *per se*, but rather entail the mistaken recording of relationships by a householder who lives with other adults, two of whom are in fact unmarried partners. The mistake the householder makes here is failure to recognize that he must mark his *own* relationship to each household member. Further evidence or this type of error comes from the 308 households in which an adult child lives at home (C.1 in Figure 1). Inspection suggests that for many of these cases, the heterosexual unmarried partner of an adult child is mistakenly recorded as the householder's unmarried partner. (The most common pattern is a husband and wife living with a child and an adult partner close in age to the child.) It is important to recognize that these sorts of error are not likely to occur in our sample of same-sex couples,

because only 15 percent of gay and lesbian couples have any other adult in the households, and only 4 percent live with an adult child.

In sum, we read the evidence as suggesting that virtually none of the misclassification of "unmarried partner" status is due to random error or to confusion about the term, but is due instead to mistakes concerning the relationship of an individual to the householder. If in fact "unmarried partnership" was generally being interpreted correctly, then misclassification is negligible when, as in the case for the vast majority of gay and lesbian couples, there are only two adults are in the household. Even if we take the worst-case stance, however, that about 0.4 percent of non-married householders mistake the meaning of "unmarried partner," this is not particularly serious for our analysis. In our sample, there are just over 80,000 two-adult households in which both adults are the same sex. If 0.4 percent of these householders mistakenly marked "unmarried partner," we would have only about 320 couples mistakenly identified as gay or lesbian couples. This compares to nearly 7,000 cohabiting same-sex couples we actually do identify in our sample (B.3 in Figure 1).

Our optimism about the quality of the data is reinforced by a second source of validation data, from the 1970 Census. The Census Bureau studied the accuracy of the 1970 Census data by matching the 1970 short- and long-form data to the 1970 Current Population Survey. Because many CPS questions are the same as on the Census form, this matched file comprised a sample of over 20,000 cases. The Bureau reports that the error rate for gender among adults is less than 0.2 percent.[18]

Of course, we still have the problem that the gays and lesbians in B.3 are only a fraction of all gays and lesbians in the population. It is possible to make some rough calculations about the extent to which the sample of same-sex partners identified in the Census is representative of the gay and lesbian population more generally. Suppose we adopt the reasonably narrow

definition of "gay" and "lesbian" to be individuals who have engaged exclusively in same-sex sex over the last year. Then, according to Table 1, 2.5 percent of men are gay and 1.4 percent of women are lesbian. Given the estimated partnership rates for gays and lesbians of 28.4 percent and 44.1 percent, respectively, we would estimate that in the United States, 0.71 percent of adult males are in gay-partnered households and 0.62 percent of women in lesbian-partnered households. These are householders who presumably might indicate on the Census forms that they live with a same-sex "unmarried partner." In our Census sample there are 2,921,421 men between the ages of 18 and 60,of whom 7,287 are partnered gays, and there are 3,207,702 women in this age category, of whom 5,762 are partnered lesbians. These latter statistics suggest that number of households that self-report as same-sex couples in the 1990 U.S. Census is considerably lower than the number counted in the GSS and NHSLS samples. For men, it would appear that about 35 percent of men living as partnered same-sex couples are recorded in the Census; for women the corresponding fraction is 29 percent.

Given that only about one third of cohabiting same-sex couples identify themselves as such in the Census, extreme care must be taken in drawing general inferences about the population of gay and lesbian couples. We certainly cannot rule out *a priori* the possibility that a householder's propensity to indicate that a same-sex partner is indeed an "unmarried partner" is correlated with individual characteristics, like age and education. One way of addressing this problem is to compare demographic characteristics of gay and lesbian couples in the Census sample with corresponding information in the GSS and NHSLS (which are much closer to being true random samples) or other data sources.[19] Also, there may be some cases in which the data can be used to form bounds on parameters of interest. Beyond this, researchers must use informed judgement as to the suitability of the Census data for addressing particular questions.[20]

Characteristics of Gays and Lesbians in the United States: Results from Two Data Sources

We now turn to the characteristics of the gay and lesbian population. We focus on four issues that are relevant for current discussions in public policy. These are the geographic distribution of gays and lesbians, the propensity to serve in the military, family structure, and earnings and earnings-related characteristics. As discussed above, great care must be taken in interpreting results, as gays and lesbians are defined differently in each data source. In addition, one must be sensitive to the likelihood that at least some of the sample of "gays" and "lesbians" are heterosexuals that have been miscoded (especially in the GSS). In this section, we look for differences between gay men and other men and lesbian women and other women that are qualitatively consistent across data sources. The presence of consistent differences between gays, lesbians and other individuals also helps establish the validity of each data source.

Geographic Concentration

Our first use of the Census sample is to provide some information about the geographic distribution of gay and lesbian couples in the United States. This information is interesting in its own right, and it is helpful also for providing further evidence that our sample of same-sex couples is not predominantly mismeasured opposite-sex couples.[21] In Table 5, we list the 20 cities in the United States that contain at least 1 percent of the Census sample of gay couples, along with the percent of the total sample contained in each city. These 20 cities, which are home to less than 26 percent of the United States population, contain nearly 60 percent of our sample of gay men. Clearly gay men are concentrated in a selected number of urban areas.

Columns (5) to (7) in Table 5 reorders the 20 cities by a "concentration measure"—the fraction of the gay sample that resides in a city divided by the corresponding fraction of the United States population in the city. (Notice that for the United States as a whole, this ratio

equals 1.0. Numbers higher than 1.0 indicate a higher than average concentration of gay couples.) While Los Angeles has more gay men than San Francisco, San Francisco has a much higher concentration of gays than any other city in the United States; gay men in our sample are about 12 times more likely to live in San Francisco than are other individuals in the United States population. Among other cities with a large gay population, Fort Lauderdale, Seattle, Los Angeles, San Diego, and Washington DC, and Atlanta have especially high concentrations of gay couples.[22]

Unfortunately, there are no reliable data, other than the Census, suitable for calculating even the most rudimentary statistics on the location of the gay and lesbian population.[23] Thus we cannot compare our results with findings from other samples. We can gain some confirmatory evidence, however, by investigating the spatial distribution of AIDS deaths in 1990. In 1990, a large fraction of men who died of AIDS were gay. This is particularly true among groups for whom injection drug use is not prevalent, for example white men aged 25 to 44.[24] Using the 1990-detail mortality file we calculate the total number of deaths and number of deaths by AIDS for white men aged 25 to 44 in 300 SMSA's.[25] Out of 2,151,890 deaths in the United States in 1990, 74,600 occurred to white men aged 25 to 44 and of these deaths, 12,844 were diagnosed as deaths due to AIDS. For each of the identified SMSA's in Table 5, we construct an AIDS death concentration ratio—the fraction of AIDS deaths in a city divided by the corresponding fraction of the all deaths in the city. Column (8) shows what one would expect: AIDS deaths to men aged 25 to 44 are particularly prevalent in SMSA's where there is a high concentrations of gay men as measured by same-sex male couples in the Census. Among the 20 cities that have the highest concentration of gay men, the correlation between the gay concentration index and the AIDS death index is 0.89 (significantly different from zero at the 0.01 level). Just as 59 percent of

same-sex male partners live in the 20 cities listed, 54 percent of all deaths from AIDS to white men aged 25 to 44 occurred in these same 20 cities.

In Table 6 we list the 20 cities in the United States with the largest number of lesbian couples in the Census sample. These cities contain just 25 percent of the American population, but 45 percent of lesbians in the sample. As with the gay sample, lesbian couples are concentrated in a select number of urban areas. Notice, however, that over one-half of the lesbian couple sample is contained outside these 20 cities entirely. While lesbian couples are more concentrated in selected cities than women generally, they are substantially less concentrated than are gay men.

By focusing on cities in which the largest number of gays and lesbians reside, we have necessarily listed only large cities. In Table 7, we list smaller cities in which gay men and lesbian women reside. Specifically, we rank smaller cities, population 200,000 to 700,000, by our gay/lesbian concentration indices.[26] It is noteworthy that a large number of these cities are "college towns." For both gay men and lesbian women, 7 of the 10 small cities with high gay/lesbian concentrations have a major university.

Veteran Status

We turn next to the interesting and controversial issue of military service among gays and lesbians. Table 8 provides for men a comparison of military service for same-sex partners and other men. While it appears that partnered gay men are much less likely than other men to be veterans, a substantial proportion (about 17 percent) of the sample are veterans, in the reserves or on active duty status in the military. The second panel of Table 8 shows an interesting pattern. Historically, gay men have served in the military at about the same rate as other men. Gay men who reached draft age (age 18) during the World War II or Korean War era did serve in the military at nearly the same rate as other men. In addition, during this period, gay men who were

in the military served on average 3 to 3.5 years. This is only slightly lower than the average tenure for other men. The rate of military service has been falling for men in general over the past several decades, and has been falling more rapidly for gay men than for other men. During the current era it appears that the fraction of gay men in the military is substantially lower than the fraction of other men that served in the military. It also appears that among men in the military since the Vietnam War era, gay men served somewhat fewer years than other men.

For women, patterns are quite different. In the United States, military service is not particularly common for women in general, but it appears to be much more common among women in same-sex partnerships. Table 9 displays these patterns. We see that while 1.4 percent of women have served in the military, 6.6 percent of women in same-sex partnerships have served in the military. The history of this military service follows an interesting pattern. Of women in same-sex partnerships who reached enlistment age (age 18) during the World War II and Korean War Eras, over 10 percent served at some time in the military. Among other women in this cohort, 1 percent to 1.6 percent served at some time in the military. It also appears that during this time period, women in same-sex partnerships who served in the military accumulated far more years of duty than other women. In fact, until the post-Vietnam cohort, the years of service for lesbians who served in the military was similar to the number of years served by men.

It is possible, using statistics presented here to form a very rough estimate of the fraction of female veterans who are lesbian. Suppose the Laumann et al. (1994) estimate that 0.014 of women are lesbian pertains over the several decades under study, and suppose further that veteran status does not affect the rate of same-sex partnering among women. Then about 8.6 percent of the female veterans who came of enlistment age during World War II are lesbian.[27] Among the female veterans who came of enlistment age during the Korean War, 14.5 percent are lesbian.[28] The higher fraction of lesbians among women who reached age 18 during the Korean

War era is the result of the extremely low rate of enlistment of heterosexual women. During this period (as well as World War II) married women and women who became pregnant were not allowed to serve. These restrictions presumably limited the number of heterosexual women eligible (and inclined) for military service. Ironically, though the military was an organization that had explicit discriminatory policies against both women and against homosexual people generally, these policies interacted in a way that allowed many lesbian women to be relatively successful. One branch of the military, the Women's Army Corps, has been described as an "almost quintessential lesbian institution" (D'Emilio 1983, p. 27). Undoubtedly, changes in military policy about pregnancy and marriage for women, have, over time, resulted in an increase in female enlistment rates, and in turn have caused a decline in the fraction of military women who are lesbian. While lesbians continue to be over represented in the military, it appears that among women who turned 18 in the post-1975 era, about 4.5 percent of those serving in the military are lesbian. It is also worth noting that in the current era the average years of military service for lesbians and other women has become much more similar.

Table 10 provides further evidence about the veteran status of gays and lesbians using the combined GSS-NHSLS data. A comparison of Table 10 with Tables 8 and 9 allow us to compare the random sample of all gays and lesbians with the Census sample of partnered gays and lesbians. The rate of military service among partnered gays in the Census data is almost exactly the same as for gays in the GSS-NHSLS data (17.3 percent versus 16.9 percent). When we check the household roster for gender errors the GSS-NHSLS sample is unchanged in this case. When we look for military service rates among gay men who have had a female partner at some time, the military service rate declines, but the sample used in making this inference is very small.[29] Like the Census, the GSS-NHSLS data suggest that military service rate is much higher for lesbian women than for other women. Sample sizes are small enough that the service rate is

not at all precisely estimated, but the rate calculated for lesbians (with household roster checked) is similar in the GSS-NHSLS data (8.1 percent) and Census (6.6 percent). The general pattern is the same in the two data sets: lesbians are much more likely to be veterans than other women, while gay men are somewhat less likely to be veterans than are other men.

Family Structure

Although adoption and parental rights policy for gay and lesbian couples is a hotly debated topic, there is virtually no empirical evidence on the current presence of children among gay and lesbian couples. The Census sample provides us with the first reliable statistics on this matter. As indicated in Table 11, these data indicate that a substantial number of same-sex couples, especially lesbian couples, currently have children present in the home. About 21.7 percent of partnered lesbians and 5.2 percent of partnered gays have children at home. Most of these are relatively young children; 71 percent of the children in lesbian households and 76 percent of those in gay households are under the age of 18.

The combined GSS-NHSLS data provides a more dramatic story. These data include, of course, not just partnered gays and lesbians, but also single gays and lesbians, and gays and lesbians who are married (and may still reside with their spouse). In this sample, over 14 percent of gays and over 28 percent of lesbian have children in the household. Many of the children in gay and lesbian households were probably born in previous marriages. In the Census sample, nearly 20 percent of men in gay partnerships and 30 percent or women in lesbian partnerships have previously been married or (in a small number of cases) are currently married (see Table 13). For gays and lesbians more generally, as measured in the GSS-NHSLS, even more of these individuals are previously or currently married. According to Table 14, as many as 30 percent of the gay men and 46 percent of the lesbians may have previously been married or are currently married. However, these measured rates do decline somewhat when we make sample

adjustments designed to reduce classification error. In particular, it seems very likely that a married gay or lesbian individual will have had opposite-sex experience. Thus, readers may wish to focus on the last column in Table 14. The data here seem to indicate that about 25 percent of gay men and 40 percent of lesbian women are married or have previously been married. (Notice that these percentages are not greatly different from the corresponding estimates for partnered gays and lesbians in the Census data..) A small but non-trivial number of gays and lesbians are currently in a heterosexual marriage. Many men and women may discover their homosexual orientation during marriage and remain legally married but separated from their husband or wife. (Also, some may remain married for personal reasons, such as shielding their children from social pressures resulting from having a homosexual parent.) In general, many couples separate without doing so legally and often this can last until one partner decides to remarry.

Education, Earnings, and Wealth

Education. The gays and lesbians in the Census sample appear to be highly educated, span the distribution of ages, and are similar in racial make-up to the population as a whole. On the dimension of education, it appears that same-sex partners in the Census sample are generally highly educated (see Table 15). Regardless of the age cohort, gays and lesbians are much more highly educated than their heterosexual counterparts. It is difficult to know if this finding arises from the selection of respondents (e.g., well educated gays and lesbians are more likely to indicate "unmarried partner" status to the Census than their poorly educated counterparts) or that gay and lesbian partners in fact have higher educational attainment.

We can get some indication about this issue by comparing the education statistics for gays and lesbians in the Census with those found in the GSS-NHSLS. In the first two panels of Table 16, we present the educational attainment of respondents from the GSS-NHSLS data. The patterns in the GSS-NHSLS are similar to those in the Census: individuals identified as gay or

lesbian are substantially more educated than the general population. The partnered gay and lesbian individuals in the Census data are particularly well educated—a higher fraction have post-college education than other individuals in the Census, or, for that matter, than gay and lesbian individuals in the GSS-NHSLS.

The difference between the education levels of gays and lesbians in the Census data and the GSS-NHSLS data may of course reflect the unwillingness of gays and lesbians with less education to indicate an unmarried partnership status on the Census form. Perhaps a similar selection bias arises in the GSS-NHSLS data, but the extent is less pronounced. Addressing this issue properly is a non-trivial matter. Here we pursue only one of the potential avenues for examining this type of selection in the GSS.

It is well known that an individual's education is correlated with his parents' education. Suppose we take as a working assumption that the relationship between an individual's education and his father's education is the same for gay men as for other men. Now consider the null hypothesis that educational attainment is the same for gay men as for other men. (Under this null hypothesis, the relatively high observed educational levels of gay individuals in the GSS are simply the result of high-education gay men being more willing than low-education gay men to report same-sex sexual relationships.) Given our working assumption, we would expect that the gay individuals in the GSS sample would have disproportionately well-educated fathers. Under the null hypothesis, the *true* distribution of *father's education* is the same for the gay population as for other men, but the *observed* distribution of *father's education* will be skewed toward higher levels of education because of selection bias (as fathers of poorly educated gay men are less likely to appear in the sample). Empirically, however, we find *no* evidence of such a pattern: The third panel of Table 16 shows that the distribution of education of fathers of gays is almost identical to the education of other individuals in the GSS-NHSLS data. In turn, this provides

tentative evidence that the gay men individuals do in fact accumulate more education that other men. (Similar analysis for women is hampered by small sample sizes.)

Earnings. Given the high levels of education of the gays and lesbians in both the Census and the GSS-NHSLS data, it would not be too surprising to find that gays and lesbians do relatively well in terms of earnings. More importantly, there is evidence of earnings effects of sexual orientation, even having conditioned on age and education. In Table 17, we present the mean annual earnings of by age category, educational level, and relationship status for the Census data. There are two obvious empirical regularities. First, partnered gays earn substantially less than married men earn. Second, lesbian women earn substantially more than married women earn. Furthermore, lesbians in the Census data generally earn more than single women and heterosexually partnered women.

In Table 18, we attempt a similar analysis from the GSS-NHSLS data. There are two caveats. First, the earnings data from the GSS-NHSLS data are categorical. Second, because of the relatively small number of gays and lesbians in the GSS-NHSLS data, when we divide the data into education and age categories the resulting cells are extremely small. Because small cells are particularly sensitive to outliers, we present median earnings rather mean earnings for each category. Despite these problems, however, the pattern of the results is remarkable similar to the Census. Gay men appear to earn less than other men earn, but lesbians appear to earn more than other women earn. A parametric approach employed by Black, Makar, Sanders, and Taylor (1998) provides strong evidence that this pattern is statistically significant and robust to various definitions of sexual orientation.

Black et al. (1998) suggest two possible interpretations for the observed earning effects of sexual orientation. First, as emphasized in Becker's (1981) model of the family, differences in market earnings of men and women result from specialization within households and differences

in human capital accumulation decisions these individuals make when they are young. In Becker's framework, women often specialize in home production, and thus choose to limit their accumulation of market skills, which results in lower market earnings than men. At least some lesbian women, however, make human capital accumulation decisions based on an understanding that they will not marry into traditional households. This tends to increase their market-oriented human capital relative to heterosexual women. Some of this human capital accumulation would be unobservable, so in the absence of discrimination against lesbians, lesbian women earn *more* on the average than other women earn with similar observed individual characteristics.

The argument for men is different. Single men and men in gay relationships are predicted to earn less than married men because there is less scope for specialization over market and household production for these individuals than for married heterosexual men. If heterosexual men made human capital investments under the expectation that they would marry, and instead remain single, these men will have "over invested" in human capital, and may earn more than gay men who from a younger age understood that it was unlikely that they would form traditional households.

The logical structure here is simple: Sexual orientation is taken as exogenous. Individuals who are gay or lesbian face different constraints than other men and women, and therefore make different optimal choices over important dimensions of their lives. Some of these differences affect earnings in ways that are not completely fully captured by the limited human capital measures available in our data. Thus, sexual orientation appears as a significant variable in earnings regressions.

The second story that appears consistent with the data is a subtle discrimination story. For males, anti-gay sentiments in labor markets result in lower equilibrium wages gay men. For lesbians, outcomes are more involved. In her book *Understanding the Gender Gap: An Economic History of American Women*, Goldin (1990) documents that women in the early

twentieth century generally faced difficult decisions about families and careers. Many employers had policies to not hire married women and to fire single women when they married. Employers also frequently adopted the practice of refusing to hire women with small children or dismissing women when they became pregnant. These "marriage bars" and "pregnancy bars" were the most visible of the explicit and implicit restrictions imposed to "protect" women, whose proper role was seen as being in the home.

Ironically, the paternalistic form of gender discrimination may have adversely affected lesbian women less than other women, as lesbian women more often had the relative freedom to pursue career objectives in the absence of the socially important constraint of having husbands and children. In this environment, many lesbian women would be expected to have generally accumulated human capital and to have made other career decisions that improved their relative position in the labor market. Given that many discriminatory practices against women focused on women who were married and/or had children, lesbians may often have been simply "overlooked." This in turn could be a contributing factor to the currently observed labor market success of lesbian women relative to other women.[30]

Wealth—Home Ownership. Limited information exists in the Census about household wealth. One important exception is home ownership. In Table 19, we compare the value of the home owned by age category and relationship status. There are two obvious features in the data. First, regardless of age category, the rate of homeownership is lower for partnered gays and lesbians households than for married couple households. This is hardly surprising. The legal system of the United States is much better equipped to handle the disbursement of property from a divorce than from unmarried partners or unrelated adults. Partnered gay and lesbian households do have higher home ownership rates than single and heterosexually partnered households. Again, this is hardly surprising. Single households do not have access to dual incomes, which clearly makes buying a house somewhat more difficult. Heterosexual partners

may decide to marry when buying a house, an option not currently available to gay and lesbian couples.

Second, conditional on owning a house, lesbian couples appear to have somewhat more expensive homes than their heterosexual counterparts, and gay couples appear to have much more expensive homes than their heterosexual counterparts. Of course, given the differences in education levels we documented above, this may simply reflect the fact that gay and lesbian couples are more educated on the average than heterosexuals (and thus have relatively high earnings). In Table 20, therefore, we repeat the analysis for set of individuals who have obtained a college degree. While the differences among gay and lesbians couples and their heterosexual counterparts are somewhat muted, the basic pattern remains.[31]

Conclusion

In this paper, we examine two data sets that scholars can use to produce demographic research on the gay and lesbian population. The GSS-NHSLS provides a random sample of gay and lesbian individuals in the United States. By aggregating across successive waves of the survey, researchers can now construct a sample large enough to do some credible empirical work on the gay and lesbian sub-samples. The GSS-NHSLS data allows researchers to examine coupled gays and lesbians, single gays and lesbians, and individuals engaging in homosexual sex while living in a heterosexual marriage. The detailed information in the GSS-NHSLS data allows researchers considerable leeway in defining what it means to be gay or lesbian. We document above a number of measurement-error problems that can produce misclassification of sexual orientation by researchers using the GSS-NHSLS, but we suggest also some solutions to these issues.

The 1990 U.S. Census provides a much larger sample of gays and lesbians. In contrast to the GSS-NHSLS, though, only partnered gays and lesbians can be studied. Our analysis of these data suggests that nearly all of the same-sex couples identified in the Census data are in fact same-sex partners (not misclassified heterosexual couples). However, only about one-third of gay and lesbian couples are reported as such in the Census, so selection bias is a potential concern.

Together, these data allow us to offer a more complete statistical portrait of the gay and lesbian population than has previously been available. Importantly, empirical observations along such dimensions as veteran status, education, and earnings are remarkably similar in the two data sets. This provides increased confidence in the quality of the data sources and in the reported results more generally. Among the findings of this paper are:

- Sixty percent of partnered gay men in the United States are concentrated in only 20 cities. Cities such as San Francisco, Washington DC, Los Angeles, Atlanta, and New York have especially large concentrations of gay men. There is a very high correlation between the cross-city distribution of gay couples, as measured in the 1990 US Census, and 1990 death rates of AIDS among young men, giving increased face validity to the findings. Partnered lesbian women are somewhat less concentrated in large urban areas than are gay couples.

- Gay men have historically served in the military in relatively large numbers. Gays who were young men during the World War II and Korean War eras, were about as likely to serve in the military as other men. More recently, gay men have been less likely than other men to serve in the military. In contrast, lesbian women are much more likely than other women to have served in the military, though this difference appears to have declined over the past five decades.

- Many gay men and lesbian women have children, often from previous marriages. A non-negligible fraction of gay and lesbian people are currently married.

- Gay and lesbian individuals are observed to have higher educational levels than other men and women. There is suggestive evidence that this finding is not the result of selection bias in the GSS-NHSLS.

- Gay men generally earn less than other men, while lesbian women generally earn more than other women. Future research on this topic may provide important clues

about the nature of specialization in households, discrimination, and labor market outcomes.

Perhaps the most useful contribution of our paper that it demonstrates the viability of doing credible empirical work on the gay and lesbian population with existing data sources. As the GSS provides additional waves, and the Census Bureau collects the 2000 Census, considerably more data will become available for this purpose. (In addition, researchers have not yet exploited the confidential files of the 1990 Census for the study of the gay and lesbian population.) We are hopeful that the growing body of research on the gay and lesbian population will prove useful along two dimensions: First, this work holds promise for improving understanding of a population for which there has previously been little systematic research based on large samples. Second, analysis of gays and lesbians can inform a wide variety of issues. We believe that careful theoretical and empirical work that pays careful attention to sexual orientation can be helpful in understanding questions about the general nature of labor market choices, human capital accumulation, specialization within households, and many other issues of interest to social scientists.

Endnotes

* The authors gratefully acknowledge financial support from a grant from NICHD. This work was begun when Black was visiting the Heinz School at Carnegie Mellon University and completed while Sanders was on leave at the Hoover Institution.

1. For example, the city of San Francisco was unable to estimate the number of partnered households or the rate at which one domestic partner was not covered by benefits. This led Carol Piasente, a spokeswoman for the San Francisco Chamber of Commerce, to comment, "We don't have a clue about costs. That's the problem. Nobody knows." ("S.F. Seeks Equal Treatment" *San Jose Mercury New*, Sunday, December 29, 1996, p. 3b.)

2. To the extent we provide a literature overview of work on gays and lesbians, we restrict attention to studies in economics and sociology. Nearly all empirical work of gays and lesbians in other fields is based on samples that do not have known sampling frames (see Sell and Petrulio 1996).

3. Kinsey's subjects were all purposefully recruited rather than drawn from a known sampling frame. As is still common in research on gays, Kinsey selected his subjects from many venues including institutional settings such as prisons and reform schools. See Lauman *et al*. (1994) for further discussion.

4. The first definition is used in Lauman *et al.* (1994), Badgett (1995) and Black *et al* (1998). The second definition is used in Badgett (1995) and Black *et al.* (1998). The third and fourth definitions are used in Lauman *et al.* (1994). and Black *et al.* (1998).

5. This definition of partnership may be inaccurate if, for example, a gay respondent is living with a male roommate who is not his sexual partner. Unfortunately, the GSS consistently reports only that there is an unrelated adult in the household, and does not consistently report whether this unrelated adult is a partner or a roommate. When a gay or lesbian person lives with an unrelated adult of the same sex, however, we find that the probability of that individual having a regular sexual partner is close to one. For example, of the 29 lesbians who were partnered by this definition, 27 had a regular sexual partner. (By comparison, fewer than half lesbians that were not partnered by this definition had a regular sexual partner.) Because of this ambiguity we consider a gay or lesbian as partnered only if they live with a person of the same gender identified as a spouse or an unrelated adult *and* they report having a regular sexual partner.

6. This assumes the proportions of gays, lesbians and heterosexual men and women in the population are as given above.

7. It seems almost impossible that own or partner's gender is recorded incorrectly in the NHSLS. Many questions in the NHSLS are gender specific. Therefore, if gender was

recorded incorrectly many questions would be asked that were nonsensical, an error unlikely to go unnoticed.

8. We limit our analysis to respondents who were recorded as the head of household or the spouse of the household head. If we assume that the two gender reports are independent and error rates symmetric, then the two reports disagree whenever one records the respondent's gender correctly and the other does not. That is, the $\textit{error rate} = (1 - 0.96130) = 2 \times \Pr(P = M \mid P^* = M) \times (1 - \Pr(P = M \mid P^* = M))$, so $\Pr(P = M \mid P^* = M) = 0.0195$.

9 Table 1 shows that only 3.6 percent of all women and 4.7 percent of all men have ever had a same-sex sex partner.

10. The 1 percent PUMS can be combined with the 5 percent PUMS to obtain still larger samples of gays and lesbians. Use of confidential files would allow for a much larger sample.

11. There is one married same-sex couple in the entire 5 percent 1990 PUMS.

12. We exclude households in which any member's relationship to the householder is allocated, so that we would not mistakenly classify multiple partnership households as single partnership households.

13. A "marriage-like relationship" refers to a married couple or partnered couple (either opposite- or same-sex).

14. We assume, for the moment, that polygamy or polyandry is negligible in our sample.

15. Or that the age or gender of a member of the household was allocated.

16. To calculate error rates here we look at the number of errors (cases in which one of the adults was marked "partner") divided by the number of people at risk, 2x(139,865+46).

17. This is the sum of the 131,598 households with no partnerships, 20,858 households with one partnership, 540 households with two unmarried partners recorded and 52 with more than two unmarried partners.

18. There is no similar matched file for the 1990 Census. There is a second Census study, the "content re-interview survey" in which several thousand households from the 1990 long form roster were re-interviewed six months after the original census survey to validate the 1990 Census data. While the data on gender and partnership status were collected, the accuracy of these two data items is not reported in the Bureau's report; see US Census Bureau (1993) and (197x).

19. In the following section, we conduct this sort of exercise for several characteristics.

20. For example, in estimating wage regressions, Klawitter (1997) implicitly assumes that having conditioned on a variety of characteristics (such as education and potential experience), self-identification by cohabiting lesbian women is not correlated with her wages in the labor market. We find this to be a reasonable working assumption, especially given that the alternative is to simply abandon the important goal of studying the role of sexual orientation in labor market outcomes.

21. If opposite-sex couples comprised the bulk of the sample, one would expect the geographic distribution of same-sex couples to be similar to the population of the United States as a whole. This is very clearly not the case.

22. In Black, Gates, Sanders, and Taylor (1999), we present some additional statistics concerning the distribution of gay couples across large United States cities, and test some hypotheses concerning the observed distribution.

23. We can not report the geographic distribution of gays and lesbians from the GSS as this information is confidential.

24. Of white men aged 25 to 44 that died of AIDS in 1990, 88 percent were gay men.

25. The detail mortality data file is a 100 percent enumeration of deaths in the United States.

26. We are reluctant to provide statistics for smaller cites yet because sample sizes (of gay and lesbian couples) become too small.

27. For the World War II era cohort, 10.2 percent of lesbians are veterans while 1.6 percent of other women are veterans. Using Bayes' rule we calculate the probability of being lesbian among World War II era women as (0.014x0.102) / (0.014x0.102 + 0.986x0.016) = 0.085.

28. By a similar Bayes' rule calculation we find the probability of being lesbian among the Korean War era women is about 14.5 percent, (0.014x0.119) / (0.014x0.119 + 0.986x0.010) = 0.145.

29. As noted above, by restricting attention to gay men who have previously had a female partner, we almost certainly eliminate any women who are miscoded as men. Unfortunately, in this case the sample size is too small to be useful for calculating military service rates.

30. An interesting case in point is military policy toward gays and lesbians as it developed in the 1940's. During World War II, the military for the first time implemented a formal policy excluding homosexuals, and explicitly asked recruits about sexual orientation. Gay servicemen could be given "blue discharges" (neither honorable nor dishonorable) and banned from receiving veteran benefits even if they had committed no known sexual

acts while in the military. The experience for lesbians was quite different. Essentially lesbian women were overlooked; procedures to screen out lesbians were not put into place until October 1944. (See, e.g., Miller 1995.) Instead, the military had in place restrictive paternalistic criteria of the sort Goldin documents for the private sector: married women were not allowed to enlist, and women who became pregnant were immediately discharged. It is not surprising that a large number of lesbian women served in the military in World War II (as documented above, and also in D'Emilio 1983; Shilts 1995). Interestingly enough, then, though the army was an organization that had explicit discriminatory policies against both women and against homosexual people generally, these policies interacted in a way that allowed many lesbian women to be relatively successful.

31. Further analyses along these lines, at the individual and household level, would clearly be warranted. For example, one could use Census information on interest and dividend income as a starting point. We defer such work for another occasion.

Table 1. Sample Sizes (and Incidence) of Gays and Lesbians for Various Definitions[a] in the Combined 1988-91, 1993, 1994, and 1996 GSS and NHSLS

	Women		Men	
Definition of Homosexuality	**Lesbians**	**Bisexual Women**	**Gay**	**Bisexual Men**
1. At least one same-sex partner since age 18[b]	260 (3.6%)		260 (4.7%)	
2. More same-sex than opposite-sex partners since age 18	123 (1.8%)		164 (3.1%)	
3. Same-sex sex and opposite-sex partners over the last year		29 (0.5%)		33 (0.6%)
Exclusively same-sex sex partners over the last year[c]	88 (1.4%)		139 (2.5%)	
4. Same-sex sex and opposite-sex partners over the last five years		66 (1.2%)		72 (1.6%)
Exclusively same-sex sex partners over the last five years[c,d]	78 (1.5%)		115 (2.6%)	
5. Self-identified gay, lesbian, or bisexual[e]	12 (0.6%)	10 (0.5%)	27 (1.8%)	11 (0.5%)

[a]Excluded from the analysis are all individuals who had an inconsistency that suggests that their recorded gender or sexual history may be in error. The GSS asked the gender of the respondent and then the gender of each member of the household. If the GSS recorded different genders for the respondent in these two parts of the survey the observation was not used. In addition, if an individual indicates either having had sex with a person of a particular gender over the last year (or last five years), yet also reported having *never* had sex with a person of that gender since age 18, the observation is excluded from analysis. Similarly, if a respondent reports having had a child born to him or her, yet reports never having had opposite-sex sex, the observation is dropped from analysis.

[b]Beginning with the 1989 survey, questions on the number of male and female partners of the respondent since age 18 were asked.

[c]Categories included exclusively same-sex sex, exclusively opposite-sex sex, sex with both men and women, and no sex during relevant time period. More individuals may have had exclusively same-sex sex over the last five years than over the last year as more individuals have had sex at all over the last 5 years than over the last year.

[d]Asked in the GSS since 1991.

[e]Asked only in NHSLS.

Table 2. Fraction of Men and Women with Same-Sex Sexual Experience Who are Gay or Lesbian by Various Definitions[a] (combined 1988-91, 1993, 1994, and 1996 GSS and NHSLS)

	2. More Same-Sex than Opposite Sex Partners Since Age 18	3. Exclusively Same-Sex Sex Partners Over the Last Year[b]	4. Exclusively Same-Sex Sex Partners Over the Last Five Years[b,c]
		A. Men	
1. At Least One Same-Sex Partner Since Age 18	0.61	0.42	0.43
2. More Same-Sex than Opposite Sex Partners Since Age 18		0.68	0.69
3. Exclusively Same-Sex Sex Partners Over the Last Year			0.83
		B. Women	
1. At Least One Same-Sex Partner Since Age 18	0.42	0.28	0.21
2. More Same-Sex than Opposite Sex Partners Since Age 18		0.51	0.49
3. Exclusively Same-Sex Sex Partners Over the Last Year			0.66

[a]The denominator for each fraction is the number of individuals ever with a same-sex sexual experience since age 18 who could be classified as gay or lesbian by the relevant definitions. For definitions based on sex of sex partners over the last year and over the last five years the risk set are all individuals that had exclusively same sex-sex, exclusively opposite-sex sex or who had sex with both men and women over the relevant time period. Excluded are individuals who had not had sex over the relevant time period as well as individuals who refused or did not answer the question. For the definition based on having had at least as many same-sex as opposite-sex sex partners only individuals who reported an exact number for the number of men and number of woman with who they had sex since age 18 are included in the risk set. People who refused to answer either question or who answered in a range (e.g., "more than one") are excluded.

[b]Categories included exclusively same-sex sex, exclusively opposite-sex sex, sex with both men and women, and no sex during relevant time period. More individuals may have had exclusively same-sex sex over the last five years than over the last year as more individuals have had sex at all over the last 5 years than over the last year.

[c]Asked in the GSS since 1991.

Source: Authors' compilations from the GSS-NHSLS data.

Table 3. Partnership Rates among Gays and Lesbians in The NHSLS and GSS

	Sample Size	Percent Currently Partnered (n)	Percent Ever Partnered (n)
Same-Sex Sex Last Year (GSS and NHSLS)	161	34.2% (55)	NA
Gay	102	28.4% (29)	NA
Lesbian	59	44.1% (26)	NA
Same-Sex Sex Last Year (NHSLS only)	44	34.1% (15)	77.3% (34)
Gay	28	28.6% (8)	67.9% (19)
Lesbian	16	43.8% (7)	93.8% (15)
Self-Identified Gay (NHSLS only)	39	25.6% (10)	66.6% (26)
Gay	27	18.5% (5)	59.3% (16)
Lesbian	12	41.6% (5)	83.3% (10)

Source: Authors' compilations from GSS-NHSLS data.

Table 4. Household Size of Apparent Multiple Marriage-Like Households, and Counts of Comparison Households

	Number of Adults				
	Three	**Four**	**Five**	**Six**	**Total**
Multiple Marriage-Like Relationships					
1 Spouse, 1 Unmarried Partner	86	46	8	6	146
2 Unmarried Partners	229	210	72	29	540
More than 2 Partners					52
Marriage-like Relationships					
Married Couples	450,631	139,865	33,486	11,125	635,107
Unmarried Partnerships	15,701	3,922	893	342	20,858
No Partnership	93,760	26,491	7,443	3,904	131,598

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 5. Twenty Cities (PMSAs) with the Largest Gay-Couple Populations, 1990 Census

	Cities Ordered by Number of Gay Couples (1)	Percent of Gay Sample in the City (2)	Percent of United States Population in the City (3)		Cities Ordered by Index of Gay Concentration (4)	Index of Gay Concentration (5)	Index of AIDS Death Concentration (6)
1	Los Angeles, CA	9.77	3.57	1	San Francisco, CA	12.23	6.83
2	New York, NY	8.37	3.39	2	Oakland, CA	3.02	1.60
3	San Francisco, CA	7.90	0.65	3	Washington, DC	2.87	1.80
4	Washington, DC	4.42	1.54	4	Los Angeles, CA	2.74	2.04
5	Chicago, IL	3.65	2.44	5	Atlanta, GA	2.66	1.70
6	Atlanta, GA	2.60	0.98	6	San Diego, CA	2.54	2.07
7	San Diego, CA	2.56	1.01	7	New York, NY	2.47	3.08
8	Oakland, CA	2.54	0.84	8	Fort Lauderdale, FL	2.37	2.92
9	Boston, MA	2.30	1.08	9	Seattle, WA	2.33	1.68
10	Seattle, WA	1.85	0.79	10	Boston, MA	2.13	1.07
11	Dallas, TX	1.76	1.03	11	Sacramento, CA	1.74	0.87
12	Houston, TX	1.66	1.30	12	Dallas, TX	1.72	2.23
13	Philadelphia, PA	1.61	1.95	13	Denver, CO	1.71	2.00
14	Anaheim, CA	1.46	0.97	14	Anaheim, CA	1.51	1.33
15	Minneapolis, MN	1.31	0.92	15	Chicago, IL	1.50	1.07
16	Fort Lauderdale, FL	1.20	0.51	16	Minneapolis, MN	1.42	1.02
17	Tampa, FL	1.17	0.83	17	Tampa, FL	1.41	1.36
18	Phoenix, AZ	1.09	0.85	18	Houston, TX	1.28	2.01
19	Denver, CO	1.07	0.63	19	Phoenix, AZ	1.27	0.91
20	Sacramento, CA	1.04	0.59	20	Philadelphia, PA	0.83	0.87
	Total	59.33	25.86		United States Average	1.00	

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 6. Twenty Cities (PMSAs) with the Largest Lesbian-Couple Populations, 1990 Census

	Cities Orders by Number of Lesbian Couples (1)	Percent of Lesbian Sample in the City (2)	Percent of United States Population in the City (3)		Cities Ordered by Index of Lesbian Concentration (4)	Index of Lesbian Concentration (5)
1	New York, NY	6.03	3.39	1	San Francisco, CA	5.06
2	Los Angeles, CA	5.35	3.57	2	Seattle, WA	3.16
3	San Francisco, CA	3.27	0.65	3	Minneapolis, MN	3.14
4	Minneapolis, MN	2.90	0.92	4	Oakland, CA	2.93
5	Washington, DC	2.84	1.54	5	Sacramento, CA	2.84
6	Seattle, WA	2.51	0.79	6	Portland, OR	2.77
7	Boston, MA	2.48	1.08	7	Boston, MA	2.30
8	Chicago, IL	2.47	2.44	8	Washington, DC	1.85
9	Oakland, CA	2.46	0.84	9	New York, NY	1.78
10	Philadelphia, PA	2.14	1.95	10	Denver, CO	1.69
11	Sacramento, CA	1.69	0.59	11	Tampa, FL	1.60
12	Atlanta, GA	1.55	0.98	12	Atlanta, GA	1.59
13	San Diego, CA	1.53	1.01	13	San Jose, CA	1.54
14	Baltimore, MD	1.39	0.95	14	San Diego, CA	1.52
15	Tampa, FL	1.33	0.83	15	Los Angeles, CA	1.50
16	Portland, OR	1.31	0.47	16	Baltimore, MD	1.47
17	Houston, TX	1.16	1.30	17	Phoenix, AZ	1.26
18	Phoenix, AZ	1.08	0.85	18	Philadelphia, PA	1.10
19	Denver, CO	1.06	0.63	19	Chicago, IL	1.01
20	San Jose, CA	0.93	0.60	20	Houston, TX	0.89
	Total	45.48	25.38		United States average	1.00

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 7. Mid-Size Cities (Population 200,000 to 700,000) Ranked by the Concentrations of Gay and Lesbian Couples

	Gay Couples		Lesbians Couples
	Top Ten Gay Mid-Size Cities		**Top Ten Lesbian Mid-Size Small Cities**
1	Santa Cruz, CA	1	Santa Rosa, CA
2	Santa Rosa, CA	2	New Haven, CT
3	Lexington, KY	3	Santa Cruz, CA
4	Eugene, OR	4	Madison, WI
5	Jersey City, NJ	5	Albuquerque, NM
6	Madison, WI	6	Salinas, CA
7	Ann Arbor, MI	7	Salem, OR
8	Montgomery, AL	8	Modesto, CA
9	Columbia, SC	9	Ann Arbor, MI
10	Lansing, MI	10	Boulder, CO

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 8. Veteran Status for Partnered Gay Men and Other Men, By Service Era, Men Aged 18 to 67, U.S. Census

Military Service by Category	Partnered Gay Men	Other Men
Any Military Service	17.3	36.8
Veteran	15.5	31.1
Reserves	1.6	4.2
Active Duty	0.2	1.5

Military Service Rates for Men who Reached Age 18 During Era	Percent with Any Military Service	Average Number of Years Served	Percent with Any Military Service	Average Number of Years Served
World War II Era (1941-1947)	72.7	3.0	75.0	3.5
Korean War Era (1950-1954)	60.6	3.6	64.3	3.9
Between Korean and Vietnam War Eras (1955-1964)	38.6	3.0	49.9	3.6
Vietnam War Era (1965-1974)	17.3	3.1	30.6	3.5
Post-Vietnam War Era (1975-1980)	6.9	2.6	14.6	3.7
Current Era (1981-1990)	7.0	1.7	14.0	2.6

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 9. Veteran Status for Lesbian partnered Women and Other Women, By Service Era, Women Aged 18 to 67, U.S. Census

Military Service by Category	Partnered Lesbian Women	Other Women
Any Military Service	6.6	1.4
Veteran	5.1	1.0
Reserves	1.2	0.2
Active Duty	0.3	0.2

Military Service Rates for Women who Reached Age 18 During Era	Percent with Any Military Service	Average Number of Years Served	Percent with Any Military Service	Average Number of Years Served
World War II Era (1941-1947)	10.2	1.6	1.6	0.8
Korean War Era (1950-1954)	11.9	3.5	1.0	0.6
Between Korean and Vietnam War Eras (1955-1964)	6.1	3.0	0.9	0.6
Vietnam War Era (1965-1974)	6.7	3.0	1.4	1.2
Post-Vietnam War Era (1975-1980)	7.2	2.8	1.9	1.4
Current Era (1981-1990)	5.1	1.4	1.7	1.0

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 10. Veteran Status by Gay, Lesbian, and Other, GSS (1988-1994), and NHSLS (1992) Data

	Heterosexual Men	Gay	Gay with Household Roster Checked	Gay and Having Had a Female Partner
Veteran Status for Men by Relationship Status				
Veteran	32.3	16.9	16.9	12.1
No service	67.7	83.1	83.1	87.9
Total	100.0	100.0	100.0	100.0
(Number)	(2939)	(77)	(77)	(33)
Veteran Status for Women by Relationship Status				
	Heterosexual Women	**Lesbian**	**Lesbian with Household Roster Checked**	**Lesbian and Having had a Male Partner**
Veteran	1.4	16.3	8.1	4.0
No service	98.6	83.7	91.9	96.0
Total	100.0	100.0	100.0	100.0
(Number)	(3514)	(43)	(37)	(25)

Source: Authors' compilations from the GSS-NHSLS data. Veteran Status was asked only in 1988 – 1994 and only on the A and B ballot of the GSS. For Gay men and Lesbian women having had an opposite sex partner cannot be assessed in 1988.

Table 11. Presence of Children in Households, U.S. Census: Children at Home (Percent) by Relationship Status

	Men			
	Gay	Partnered Heterosexual	Married	Men not Partnered
No Children	94.8	63.8	40.8	95.2
1 Child	3.0	18.1	22.4	2.9
2 Children	1.2	11.0	23.0	1.4
3 or More	1.1	7.1	13.8	0.5

	Women			
	Lesbian	Partnered Heterosexual	Married	Women not Partnered
No Children	78.3	63.8	40.8	77.9
1 Child	12.6	18.1	22.4	10.1
2 Children	5.0	11.0	23.0	7.6
3 or More	4.1	7.1	13.8	4.5

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 12. Presence of Children in Home, GSS (1988-1996) and NHSLS (1992) Data

Children At Home (Percent) By Relationship Status and Sexual Orientation

	Men				
	Married	**Other Non-Gay**	**Gay**	**Gay with Household Screening**	**Gay with Opposite-Sex Experience**
No Children	49.6	84.1	85.5	87.7	88.9
1 Child	19.9	9.2	5.1	3.8	4.8
2 Children	20.2	4.4	6.5	5.4	6.4
3 or More	10.3	2.2	2.9	3.1	0.0
(Sample Size)	(4052)	(3065)	(138)	(130)	(63)

	Women				
	Married	**Other Non-Lesbian**	**Lesbian**	**Lesbian with Household Screening**	**Lesbian with Opposite-Sex Experience**
No Children	48.3	65.7	71.6	76.4	71.7
1 Child	17.9	16.1	5.7	5.6	6.5
2 Children	21.8	11.2	15.9	12.5	13.0
3 or More	11.9	6.9	6.8	5.6	8.7
(Sample Size)	(4610)	(4786)	(88)	(72)	(46)

Children Ever Born by Relationship Status and Sexual Orientation (percent)

	Men				
	Married	**Other Non-Gay**	**Gay**	**Gay with Household Screening**	**Gay with Opposite-Sex Experience**
No Children	14.6	61.6	69.1	71.8	74.6
1 Child	17.1	11.8	10.8	9.9	12.7
2 Children	32.9	12.6	9.4	8.4	6.4
3 or More	35.4	14.0	10.8	9.9	6.4
(Sample Size)	(4081)	(3068)	(139)	(131)	(63)

	Women				
	Married	**Other Non-Lesbian**	**Lesbian**	**Lesbian with Household Screening**	**Lesbian with Opposite-Sex Experience**
No Children	13.4	33.5	59.1	65.3	65.2
1 Child	17.2	17.3	12.5	13.9	13.0
2 Children	32.9	20.2	18.8	13.9	15.2
3 or More	36.4	29.0	10.2	6.9	6.5
(Sample Size)	(4629)	(4793)	(88)	(72)	(46)

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 13. Current and Past Marital Status for Adults, Census Data

	Marital Status for Men, by Relationship Status (percentage)			
	Gay	Partnered Heterosexual	Married	Not Partnered
Currently Married	2.6	7.5	100.0	10.8
Widowed or Divorced and Not Currently Married	16.0	40.7	0	46.1
Never Married	81.5	51.9	0	43.1
Total	100.0	100.0	100.0	100.0

	Marital Status for Women, by Relationship Status (percentage)			
	Lesbian	Partnered Heterosexual	Married	Not Partnered
Currently Married	3.5	6.5	100.0	8.6
Widowed or Divorced and Not Currently Married	26.2	43.2	0	67.4
Never Married	70.3	50.3	0	24.1
Total	100.0	100.0	100.0	100.0

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 14. Current and Past Marital Status for Adults, GSS (1988-1996) and NHSLS (1992) Data: Marital Status By Sexual Orientation (percentage)

	Men			
	Heterosexual	**Gay**	**Gay with Household Screening**	**Gay with Opposite-Sex Experience**
Currently Married	57.1	20.1	18.3	14.6
Widowed, Separated or Divorced and Not Currently Married	17.7	11.6	11.5	11.1
Never Married	25.3	68.4	70.2	74.6
Sample Size	(7161)	(139)	(131)	(63)

	Women			
	Heterosexual	**Lesbian**	**Lesbian with Household Screening**	**Lesbian with Opposite-Sex Experience**
Currently Married	49.1	23.9	13.9	6.5
Widowed, Separated or Divorced and Not Currently Married	32.0	21.6	22.2	32.6
Never Married	18.9	54.6	63.9	60.9
(Sample Size)	(9439)	(88)	(72)	(46)

Source: Authors' compilations from the GSS-NHSLS data.

Table 15. Educational Attainment by Age and Relationship Status, U.S. Census

Level of Education	Panel A: Men				Panel B: Women			
	Not Partnered	Heterosexual Partnered	Gay Partnered	Married	Not Partnered	Heterosexual Partnered	Lesbian Partnered	Married
				Aged 25 to 34				
Some HS	8.72	21.56	5.57	13.59	14.87	17.95	7.03	11.83
HS Diploma	24.8	34.36	14.99	31.57	25.74	31.46	12.58	32.1
Some College	30.84	27.69	36.84	30.39	33.31	32.46	33.62	33.36
College Degree	25.39	12.64	29.47	17.66	19.25	14.26	31.17	17.86
Post College	10.25	3.75	13.13	6.79	6.83	3.87	15.6	4.85
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
				Aged 35 to 44				
Some HS	10.10	19.44	4.44	11.76	11.21	18.69	5.02	11.65
HS Diploma	22.64	30.14	9.26	24.88	24.44	32.45	10.31	31.7
Some College	32.08	31.12	30.22	30.72	34.27	32.02	26.86	31
College Degree	21.53	12.5	31.82	19.28	17.61	10.97	28.5	16.62
Post College	13.65	6.8	24.26	13.36	12.47	5.87	29.31	9.03
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
				Aged 45 to 54				
Some HS	19.7	27.81	6.04	19.01	19.55	27.23	13.29	19.37
HS Diploma	25.8	29.8	11.81	28.71	29.03	33.42	16.43	37.92
Some College	25.04	23.72	27.76	24.67	27.94	25.86	23.78	24.89
College Degree	15.47	10.63	24.43	14.31	12.13	7.52	16.62	11.08
Post College	13.99	8.04	29.96	13.3	11.35	5.97	29.88	6.74
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 16. Education Attainment, GSS (1988-1996) and NHSLS (1992) Data

Education Attainment by Relationship Status and Sexual Orientation (percent)

	Men				
	Married	**Other Non-Gay**	**Gay**	**Gay with Household Screening**	**Gay with Opposite-Sex Experience**
Below HS Diploma	16.6	18.5	11.5	12.2	7.9
HS Diploma	47.1	49.4	39.6	38.2	30.2
Some College	9.1	11.1	12.2	13.0	15.9
College Degree	17.0	14.4	23.0	23.7	31.8
Post College	10.3	6.1	13.7	13.0	14.3
(Sample Size)	(4067)	(3063)	(139)	(131)	(63)

	Women				
	Married	**Other Non-Lesbian**	**Lesbian**	**Lesbian with Household Screening**	**Lesbian with Opposite-Sex Experience**
Below HS Diploma	14.6	23.0	10.3	9.7	13.0
HS Diploma	52.4	49.5	42.5	38.9	34.8
Some College	11.0	9.6	12.6	12.5	17.4
College Degree	16.0	13.1	21.8	25.0	21.7
Post College	6.1	4.8	12.6	13.9	13.0
(Sample Size)	(4621)	(4773)	(87)	(72)	(46)

Father's Education for Gay Men and Other Men (percent)

	Gay Men	**Other Men**
High School or Less	67	70
Some College	13	13
College Degree	13	10
Post College	7	7
(Observations)	(80)	(3474)

Source: Authors' compilations from the 1990 U.S. Census, 5 percent PUMS.

Table 17. Mean Earnings by Age, Education, and Relationship Status, U.S. Census

Level of Education	Panel A: Men				Panel B: Women			
	Living Alone	Heterosexual Partnered	Gay Partnered	Married	Living Alone	Heterosexual Partnered	Lesbian Partnered	Married
				Aged 25to 34				
Some HS	$13,400	$15,043	$12,743	$19,079	$9,044	$9,126	$12,842	$9,049
HS Diploma	18,101	19,100	18,721	23,771	13,211	13,170	17,084	11,742
Some College	20,810	22,263	21,111	27,165	16,883	16,741	19,302	14,876
College Degree	27,868	29,594	29,065	35,792	24,135	23,337	24,402	21,200
Post College	33,130	39,151	32,691	42,335	27,997	27,886	26,596	26,420
				Aged 35 to 44				
Some HS	16,762	17,850	19,783	23,130	11,455	11,425	14,277	11,105
HS Diploma	22,009	23,203	20,472	28,500	16,267	15,901	17,885	13,309
Some College	26,559	27,495	27,543	33,789	20,744	20,337	25,062	16,833
College Degree	35,453	38,997	36,850	46,190	27,869	28,685	28,807	21,326
Post College	45,170	50,226	42,405	58,780	33,923	34,599	34,513	29,509
				Aged 45 to 54				
Some HS	19,986	20,999	18,860	26,431	12,801	12,567	18,641	11,751
HS Diploma	25,763	27,050	25,252	31,617	17,201	16,623	21,296	14,063
Some College	31,696	33,628	35,055	38,967	21,763	21,786	24,849	17,716
College Degree	42,155	46,340	48,075	55,444	27,921	27,952	30,054	21,893
Post College	50,503	58,942	50,177	65,266	34,032	34,412	41,876	30,885

Source: Authors' compilations from the 1990 US Census, 5 percent PUMS.

Table 18. Median Incomes by Education and Sexual Orientation, GSS 1988-1994

	Panel A: Men				Panel B: Women			
Level of Education	**Not Partnered, not Gay**	**Heterosexual Partnered**	**Gay**	**Married**	**Not Partnered, not Lesbian**	**Heterosexual Partnered**	**Lesbian**	**Married**
				Aged 25 to 34				
Some HS	16,250	11,250	13,750	16,250	5,500	6,500	9,000	7,500
HS Diploma	21,750	16,250	21,750	21,750	13,750	21,750	23,750	11,250
Some College	23,750	21,750	18,750	23,750	16,250	5,500	13,750	16,250
College Degree	27,500	21,750	23,750	27,500	23,750	16,250	27,500	21,750
Post College	32,500	37,500	18,750	32,500	23,750	27,500	16,250	21,750
				Aged 35 to 44				
Some HS	16,250	21,750	13,750	21,750	11,250	4,500	45,000	11,250
HS Diploma	27,500	21,750	9,000	32,500	16,250	21,750	18,750	11,250
Some College	27,500	32,500	21,750	32,500	.	27,500	16,250	16,250
College Degree	32,500	32,500	45,000	37,500	27,500	32,500	37,500	27,500
Post College	45,000	45,000	32,500	55,000	27,500	.	37,500	32,500
				Aged 45 to 54				
Some HS	18,750	11,250	.	27,500	11,250	6,500	.	11,250
HS Diploma	23,750	21,750	32,500	32,500	18,750	3,500	.	13,750
Some College	37,500	27,500	.	45,000	32,500	21,750	55,000	23,750
College Degree	45,000	45,000	45,000	45,000	32,500	45,000	21,750	27,500
Post College	45,000	55,000	21,750	55,000	32,500	.	.	37,500

Table 19. Value of House Owned, By Age and Relationship Status, U.S. Census

Level of Education	Panel A: Men				Panel B: Women			
	Not Partnered	Heterosexual Partnered	Gay Partnered	Married	Not Partnered	Heterosexual Partnered	Lesbian Partnered	Married
	Aged 25 to 34							
No house owned	68.09	70.88	59.51	38.14	78.76	66.44	58.87	33.50
1-25K	6.10	5.81	1.54	7.05	4.17	5.72	2.26	6.45
25-50K	5.13	4.70	2.68	8.70	4.06	5.33	3.75	8.92
50-75K	7.98	7.08	8.60	16.46	5.98	8.07	10.80	17.26
75-100	4.42	3.80	5.81	9.81	2.74	4.42	7.49	10.61
100-150K	4.29	3.75	8.27	9.75	2.39	4.48	6.84	10.79
150-200K	1.94	1.99	4.56	4.95	1.03	2.49	5.17	5.78
200+	2.05	1.99	9.03	5.15	0.87	3.05	4.81	6.69
	Aged 35 to 44							
No house owned	55.26	52.15	40.58	19.69	56.83	48.21	34.86	17.31
1-25K	6.68	5.85	0.87	4.72	4.99	6.25	1.17	4.60
25-50K	7.15	6.88	2.38	8.77	6.93	7.33	3.81	8.67
50-75K	11.16	11.32	8.46	18.77	12.18	11.96	12.96	18.81
75-100K	5.99	6.99	7.84	12.89	6.48	7.31	11.17	13.21
100-150K	6.21	6.93	10.17	13.84	5.98	7.59	12.53	14.27
150-200K	3.25	3.96	6.32	8.37	3.05	4.51	8.37	8.74
200+	4.30	5.92	23.37	12.94	3.55	6.85	15.13	14.38
	Aged 45 to 54							
No house owned	48.96	40.32	27.21	13.07	45.33	37.92	25.72	11.52
1-25K	8.85	7.46	1.34	4.97	7.59	7.85	4.04	5.28
25-50K	7.53	8.38	2.94	9.29	8.87	8.22	4.86	9.96
50-75K	11.44	12.84	10.33	19.58	14.12	13.46	12.16	20.40
75-100K	6.58	7.88	6.10	13.71	7.55	8.64	11.15	13.99
100-150K	6.71	8.48	9.46	14.42	7.02	9.02	12.91	14.28
150-200K	3.89	5.21	7.91	9.08	3.87	5.39	9.48	8.97
200+	6.02	9.43	34.73	15.88	5.64	9.50	19.69	15.59

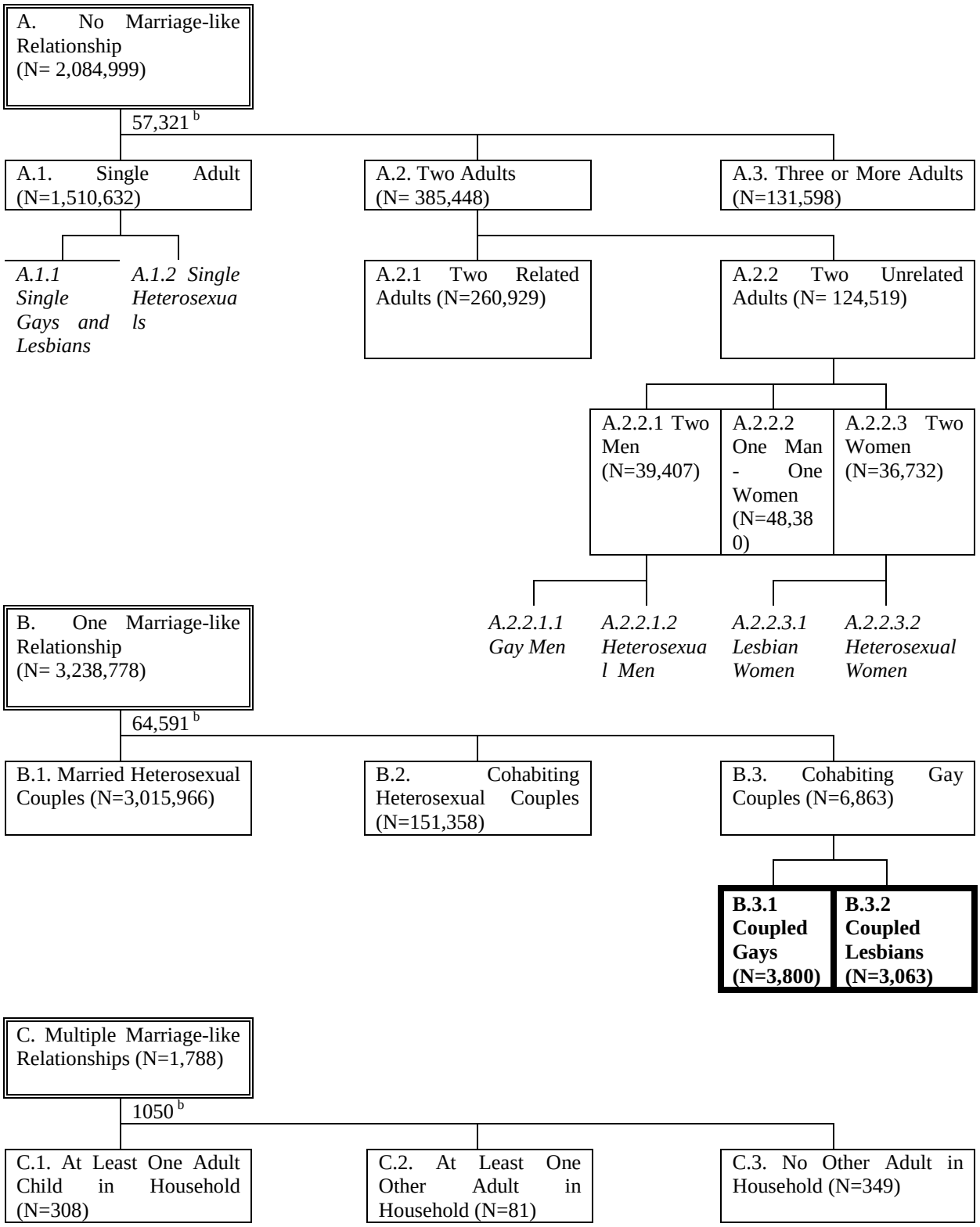
Source: Authors' compilations from the 1990 US Census, 5 percent PUMS.

Table 20. Value of House Owned, By Age and Relationship Status, College Graduates Only, U.S. Census

Level of Education	Panel A: Men				Panel B: Women			
	Not Partnered	Heterosexual Partnered	Gay Partnered	Married	Not Partnered	Heterosexual Partnered	Lesbian Partnered	Married
				Aged 25 to 34				
N/A	69.91	67.41	55.57	32.28	74.75	63.73	54.80	28.04
1-25K	1.29	0.71	0.47	1.08	1.15	1.31	0.52	1.42
25-50K	2.22	1.90	1.60	2.80	2.52	2.37	2.10	3.45
50-75K	7.31	6.18	5.76	13.11	7.53	6.74	10.82	13.85
75-100K	6.03	5.96	6.12	13.55	5.00	6.04	7.96	13.35
100-150K	6.59	7.33	10.95	16.23	5.00	7.73	9.52	16.48
150-200K	3.06	4.76	6.45	9.26	2.16	4.76	7.61	9.71
200+	3.59	5.74	13.09	11.70	1.89	7.32	6.66	13.70
				Aged 35 to 44				
N/A	51.52	40.52	35.26	13.44	45.76	36.17	28.87	11.21
1-25K	1.98	1.23	0.65	0.74	1.81	1.63	0.24	0.85
25-50K	4.25	3.00	1.60	2.87	5.14	3.34	2.21	3.13
50-75K	10.87	9.82	7.04	12.57	14.48	10.64	12.26	13.01
75-100K	8.11	9.20	7.42	13.67	10.00	9.78	12.71	13.63
100-150K	9.66	11.79	10.80	18.60	10.37	12.32	14.95	18.25
150-200K	5.46	8.22	7.01	12.84	5.43	8.71	10.05	12.71
200+	8.15	16.23	30.22	25.27	7.01	17.41	18.71	27.20
				Age 45 to 54				
N/A	44.29	29.64	22.12	8.55	34.38	25.29	16.07	7.02
1-25K	2.35	1.36	0.53	0.65	2.05	1.72	0.26	0.84
25-50K	4.25	2.66	2.18	2.10	5.20	2.64	0.78	2.81
50-75K	10.65	9.61	8.23	10.39	15.13	10.73	7.49	11.71
75-100K	8.62	9.34	6.24	12.98	11.31	10.60	13.21	13.51
100-150K	10.59	12.73	9.17	18.94	12.39	13.61	18.55	18.62
150-200K	6.68	9.26	8.89	13.45	7.20	9.46	13.58	12.74
200+	12.57	25.40	42.63	32.93	12.34	25.94	30.06	32.75

Source: Authors' compilations from the 1990 US Census, 5 percent PUMS.

Figure 1. Classification of Households into Marriage-like Relationships For a Sample with Non-imputed Relationship to Housholder for all Household Members, Public Use Micro Sample, 1990 Decennial Census[a]



[a] The total number of households in the PUMS is 6,632,090. There are 205,494 households in which at least one household member had their relationship to the householder imputed by the Census Bureau. There are 293,471 group quarters and 807,558 vacant households. Two households contained coding errors.

[b] Households with age allocated, gender allocated, or householder or partner under age 18.

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